

Work Order ID 71761

Monday, July 11, 2011 11:12:28 AM



Page 1

Item ID: D4278-041

Accept



Setup Start



Revision ID:

Item Name: Upper Rib Assembly-Hoop

Stop



Start Date: 7/11/2011 Start Qty: 1.00



Cust Item ID:

Required Date: 7/18/2011 Req'd Qty: 1.00



Customer:

Reference:

Approvals:

Process Plan:

[Signature]

Date: 11-07-11

Tooling:

Date:

Run Start



QC:

Date:

SPC (Y/N):

Date:

Stop



Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
Draw Nbr	Revision Nbr								
D4034	B								
D4278	C								

100

Weld per dwg A/R S.S. rod Batch: *M115778* 0.00



Large Fab

Memo

0.00

Large Fab

1- Assemble ribs to hoop and weld as per dwg DT

2- Weld bushing in rib and grind weld flush as per dwg

AA 11.07.15 *(Signature)*

110

QC9- Inspect visual per QSI004- Fusion Welds 0.00



QC

Memo

0.00

Quality Control

PC 11.07.15

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Work Order ID 71761

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Page 2

Item ID: D4278-041

Accept



Setup Start



Revision ID:

Stop



Item Name: Upper Rib Assembly-Hoop

Start Date: 7/11/2011 Start Qty: 1.00



Cust Item ID:

Required Date: 7/18/2011 Req'd Qty: 1.00



Customer:

Reference:

Run Start



Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Stop



QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
120 QC Quality Control	QC5- Inspect part completeness to step on W/O Memo	0.00 0.00							
130 Packaging Packaging	Identify as per dwg & Stock Location: Memo ***STOCK IN BASKET CELL***	0.00 0.00							
140 QC Quality Control	QC21- Final Inspection - Work Order Release Memo	0.00 0.00							

11-07-18

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

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NOTE: Date & initial all entries

Picklist Print

Monday, July 11, 2011 11:12:34 AM

Page 1

Work Order ID: 71761

Parent Item: D4278-041

Parent Item Name: Upper Rib Assembly-Hoop

Start Date: 7/11/2011




Required Date: 7/18/2011

Start Qty: 1.00

Required Qty: 1.00

Comments: IPP Rev:A 10.11.12 new issue DD verf:EC
11.01.20 AS PER DWG REV.C DD verf:EC

IPP Rev:B

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
D4021-7  Hoop		Manufactured	No			100	Each	4.0000	1	1		11.07.15	
				<u>Location</u>				<u>Loc Qty</u>		<u>Loc Code</u>			
				WA				4					
					56996			0					
					70339			4					
D4021-9  Bushing		Manufactured	No			100	Each	98.0000	4	4		11.07.15	
				<u>Location</u>				<u>Loc Qty</u>		<u>Loc Code</u>			
				WA				96					
					68063			32					
					70333			64					
				WA005				2					
					66437			2					
D4034-1  Rib		Manufactured	No			100	Each	20.0000	1	1		11.07.15	
				<u>Location</u>				<u>Loc Qty</u>		<u>Loc Code</u>			
				WA				20					
					67334			20					

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

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Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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NOTE: Date & initial all entries

Picklist Print

Monday, July 11, 2011 11:12:34 AM

Page 2

Work Order ID: 71761



Parent Item: D4278-041



Parent Item Name: Upper Rib Assembly-Hoop

Start Date: 7/11/2011

Required Date: 7/18/2011

Start Qty: 1.00

Required Qty: 1.00

D4034-3

Manufactured No

100

Each

3.0000

1

1



Rib

11.07.15

Location

Loc Qty

Loc Code

WA

3

58408

0

67338

3

①

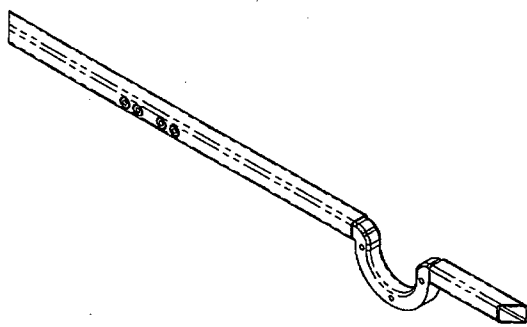
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DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

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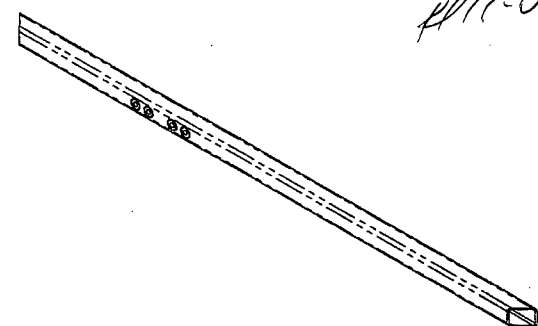
NOTE: Date & initial all entries



D4278-041 UPPER RIB ASSY-HOOP 



D4278-045 RIB ASSY, FWD CHAM



D4278-047 UPPER RIB ASSY-STRAIGHT 

SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. 71761

211-0711

RELEASED
2011-01-18
MD

REV.	DESCRIPTION	BY	DATE
C	ADDITIONAL HOLES ADDED IN D4278-041-047	SC	10.12.23
B	RMV -043 (OBSOLETE)	CP	10.11.30
A	NEW ISSUE	SC	10.11.25
DESIGN	JPH	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN	SC		
CHECKED	<i>[Signature]</i>	DRAWING NO.	REV. C
MFG. APPR.	<i>[Signature]</i>	D4278	SHEET 1 OF 4
APPROVED	<i>[Signature]</i>	TITLE	SCALE
DE APPR.	<i>[Signature]</i>	RIB ASSEMBLY	NTS
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Dart Aerospace Ltd

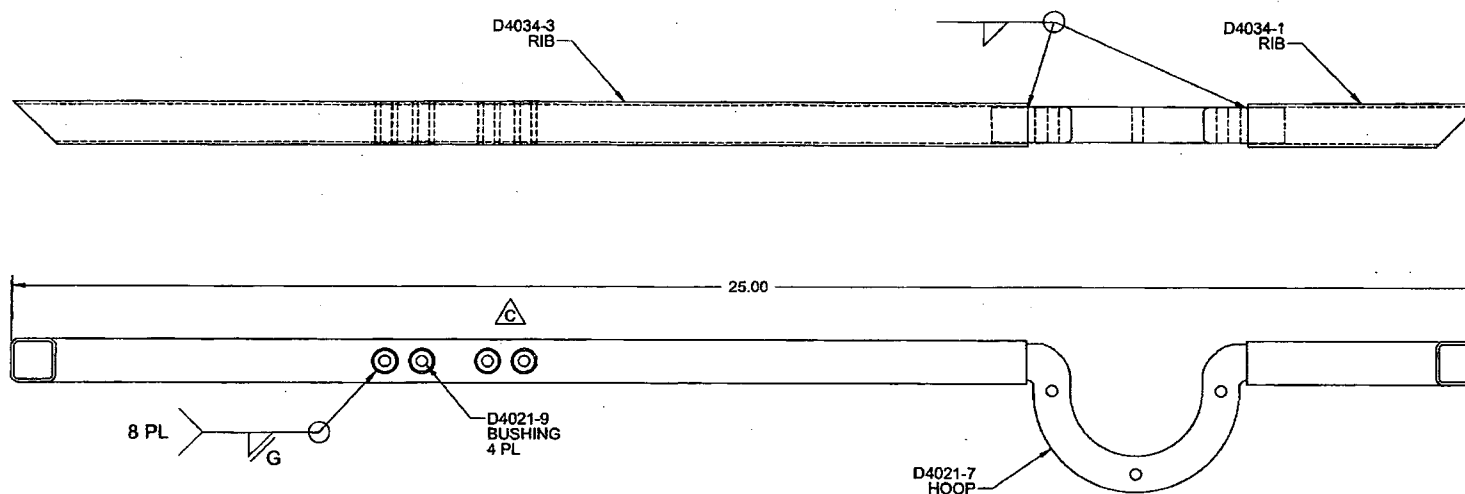
W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ **PAR #:** _____ **Fault Category:** _____ **NCR:** Yes No **DQA:** _____ **Date:** _____
Resolution: _____ **Disposition:** _____ **QA: N/C Closed:** _____ **Date:** _____

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DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

ITEM	QTY	PART NUMBER	DESCRIPTION
		D4278-041	UPPER RIB ASSY-HOOP
1	1	D4021-7	HOOP
2	4	D4021-9	BUSHING
3	1	D4034-1	RIB
4	1	D4034-3	RIB



D4278-041 UPPER RIB ASSY-HOOP

RELEASED
2011-01-18

NOTES:

- 1) MATERIAL: N/A
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: N/A
- 7) WEIGHT: 1.61 lbs
- 8) WELD PER DART QSI 004

DESIGN	JRH	DART AEROSPACE LTD	
DRAWN	SC	HAWKESBURY, ONTARIO, CANADA	
CHECKED		DRAWING NO.	REV. C
MFG. APPR.		D4278	SHEET 2 OF 4
APPROVED		TITLE	SCALE
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W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

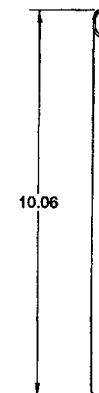
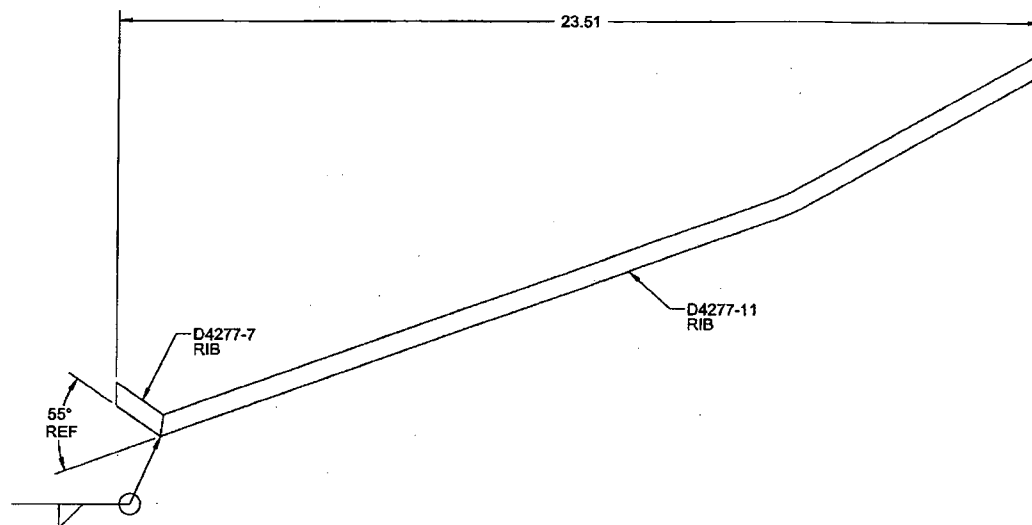
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Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

ITEM	QTY	PART NUMBER	DESCRIPTION
		D4278-045	RIB ASSY, FWD CHAM
1	1	D4277-7	MID CORNER RIB, NOTCH
2	1	D4277-11	MID DIAG RIB



D4278-045 RIB ASSY, FWD CHAM

11761

RELEASED
2011-01-18

- NOTES:
- 1) MATERIAL: N/A
 - 2) FINISH: NONE
 - 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
 - 4) UNITS: INCHES UNLESS OTHERWISE NOTED
 - 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
 - 6) IDENTIFICATION: N/A
 - 7) WEIGHT: 0.57 lbs
 - 8) WELD PER DART QSI 004.

DESIGN	JRH	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN	SC		
CHECKED		DRAWING NO.	REV. C
MFG. APPR.		D4278	SHEET 3 OF 4
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DE APPR.		RIB ASSEMBLY	NTS
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W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

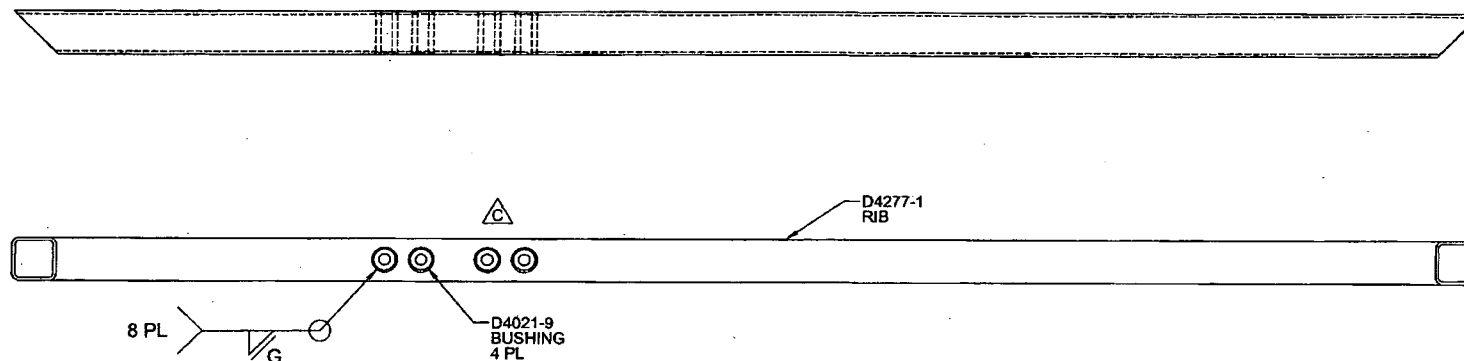
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Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

ITEM	QTY	PART NUMBER	DESCRIPTION
		D4278-047	UPPER RIB ASSY-STRAIGHT
1	4	D4021-9	BUSHING
2	1	D4277-1	RIB



D4278-047 UPPER RIB ASSY-STRAIGHT

11/16/1

RELEASED
2011-01-10

- NOTES:
- 1) MATERIAL: N/A
 - 2) FINISH: NONE
 - 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
 - 4) UNITS: INCHES UNLESS OTHERWISE NOTED
 - 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
 - 6) IDENTIFICATION: N/A
 - 7) WEIGHT: 0.95 lbs
 - 8) WELD PER DART QSI 004.

DESIGN	JPH	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN	SC		
CHECKED		DRAWING NO.	REV. C
MFG. APPR.		D4278	SHEET 4 OF 4
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W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

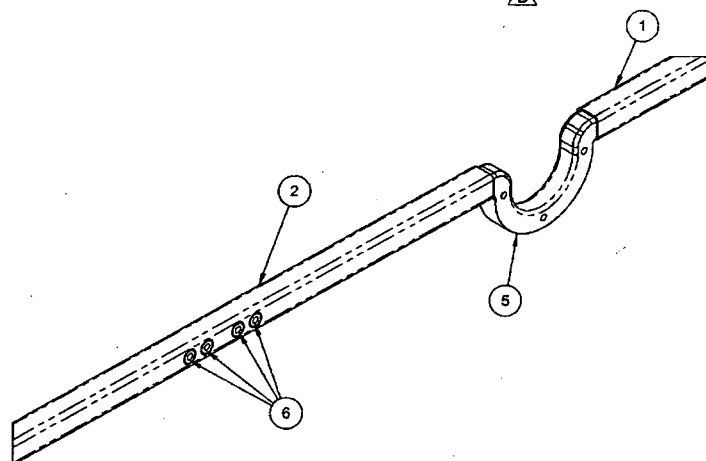
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Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

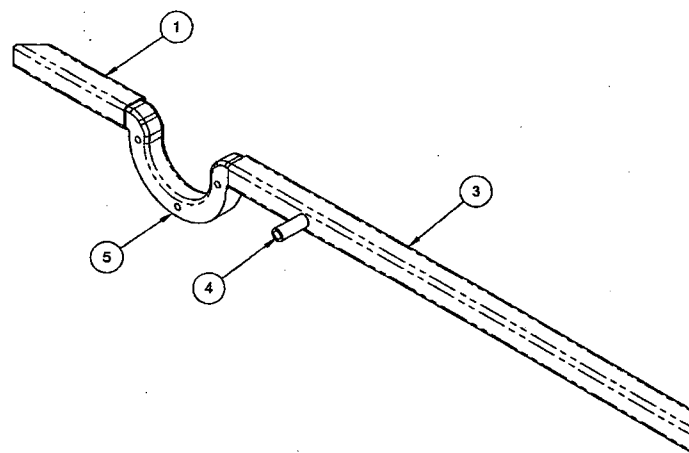
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DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

ITEM	QTY -041	QTY -043	P/N	DESCRIPTION
	X		D4034-041	AFT UPPER RIB ASSY
		X	D4034-043	FWD UPPER RIB ASSY
1	1	1	D4034-1	RIB
2	1		D4034-3	RIB
3		1	D4034-5	RIB
4		1	D2327-3	SPACER BUSHING
5	1	1	D4021-7	HOOP
6	4		D4021-9	BUSHING



D4034-041 AFT UPPER RIB ASSY



D4034-043 FWD UPPER RIB ASSY

RELEASED
R 2011-01-18
MB

B	ADDITIONAL HOLES ADDED ON D4034-3 RIB	SC	10.12.20
A	NEW ISSUE	AJS	10.03.04
REV.	DESCRIPTION	BY	DATE
DESIGN	AJS	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN	SC		
CHECKED	B	DRAWING NO.	REV. B
MFG. APPR.	MB	D4034	SHEET 1 OF 4
APPROVED	MB	TITLE	SCALE
DE APPR.	MB	UPPER RIB ASSY, BASKET BASE	NTS
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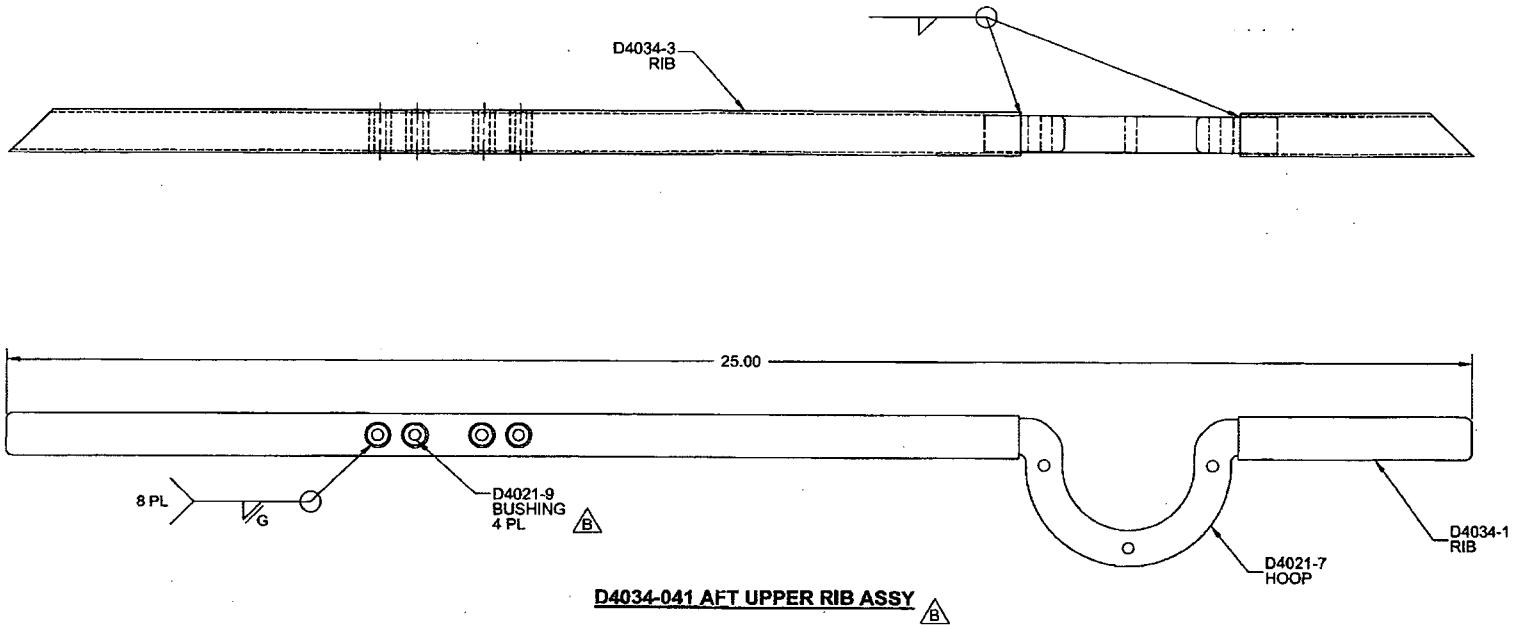
8 7 6 5 4 3 2 1

D

C

B

A



D4034-041 AFT UPPER RIB ASSY B

Handwritten: 11/17/11

RELEASED
2011-01-31

- NOTES:**
- 1) MATERIAL: N/A
 - 2) FINISH: NONE
 - 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
 - 4) UNITS: INCHES UNLESS OTHERWISE NOTED
 - 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
 - 6) IDENTIFICATION: N/A
 - 7) WEIGHT: 1.61 lbs
 - 8) WELD PER DART QSI 004

DESIGN	AJS	DART AEROSPACE LTD	
DRAWN	SC	HAWKESBURY, ONTARIO, CANADA	
CHECKED	LS	DRAWING NO.	REV. B
MFG. APPR.	AS	D4034	SHEET 2 OF 4
APPROVED	AS	TITLE	SCALE
DE APPR.	TH	UPPER RIB ASSY, BASKET BASE	NTS
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8 7 6 5 4 3 2 1

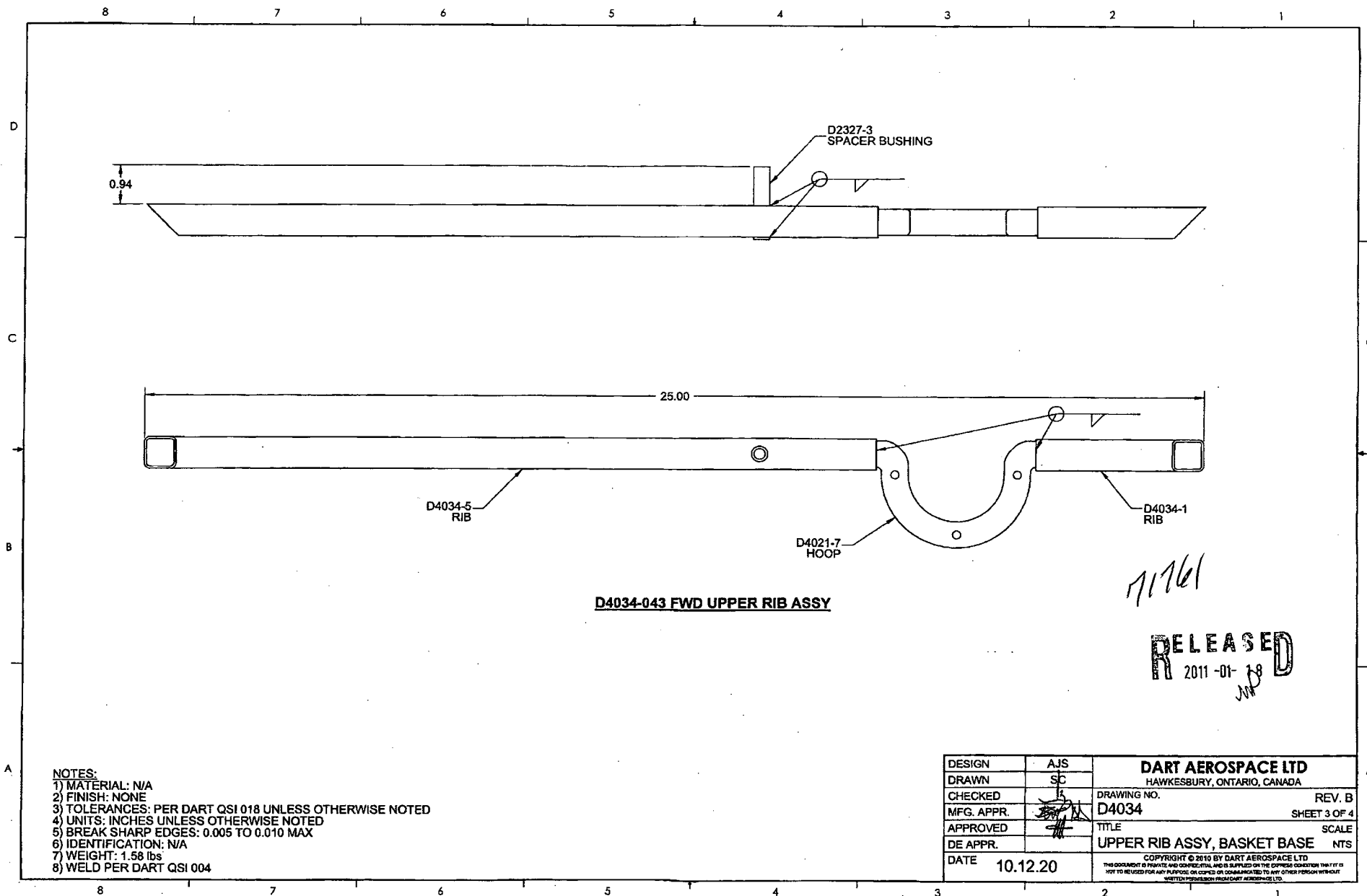
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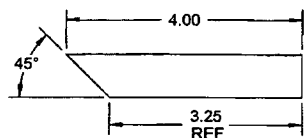
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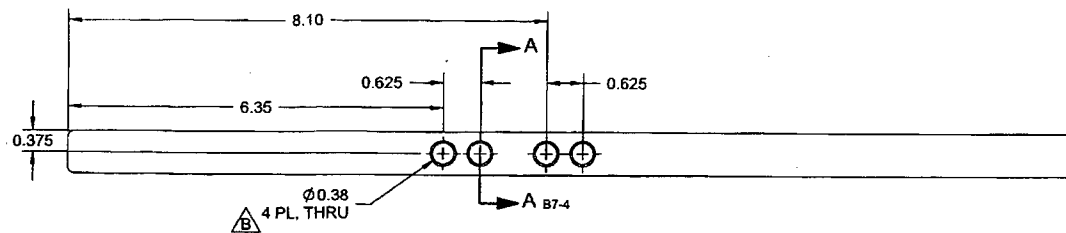


D4034-1 RIB

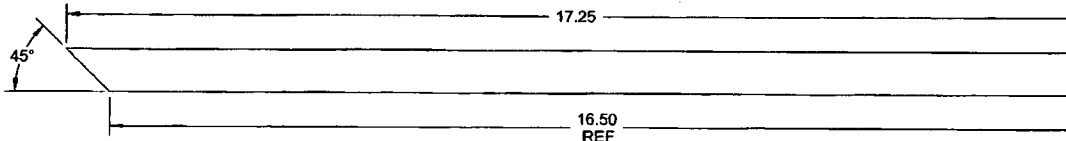
BREAK EDGE
0.030 X 45°
TYP



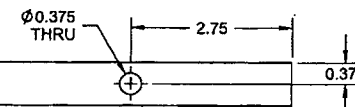
SECTION A-A D4-4



D4034-3 RIB



D4034-5 RIB



NOTES:

- 1) MATERIAL: AISI 304/316 STAINLESS STEEL SQUARE TUBE, 0.75 X 0.75 X 0.049 WALL
REF DART SPEC. M304TS0.750W.049
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: N/A
- 7) WEIGHT -1: 0.13 lbs
-3 & -5: 0.62 lbs

DESIGN	AJS	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN	SC		
CHECKED		DRAWING NO.	REV. B
MFG. APPR.		D4034	SHEET 4 OF 4
APPROVED		TITLE	SCALE
DE APPR.		UPPER RIB ASSY, BASKET BASE	NTS
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RELEASED
2011-01-10

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

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